UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,349	02/01/2001	Yechiam Yemini	18704-015	7203

28089 7590 06/17/2005

WILMER CUTLER PICKERING HALE AND DORR LLP
399 PARK AVENUE
NEW YORK, NY 10022

EXAMINER	
VAUGHN JR, WILLIAM C	

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/775,349	YEMINI ET AL.	
	Examiner	Art Unit	
	William C. Vaughn, Jr.	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/28/04,12/13/04*; 3/16/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in regards to the most recent papers received by the office on 16 March 2005.

Response to Arguments

2. Applicant's arguments and amendments filed on 31 January 2005 have been carefully considered but they are not deemed fully persuasive. Applicant's arguments are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendment (i.e., *non adjacent node being determined... assigned to said first node ... assigned to said second node*) to the claims which significantly affected the scope thereof.

Information Disclosure Statement

3. The references listed in the Information Disclosure Statement submitted on 28 October 2004, 13 December 2004 and 16 March 2005 have been considered by the examiner (see attached PTO-1449).

The application has been examined. **Claims 1-20** are pending. The objection(s) and rejection(s) cited are as stated below:

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1, 8-10 and 16, 18, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al. (Jensen), U.S. Patent No. 5,870,564 in view of Yamazaki, U.S. Patent No. 5,655,134 and in further view of Ogier et al. (Ogier), U.S. PG PUB 2002/00123220.

6. Regarding **claim 1**, Jenson discloses the invention substantially as claimed. Jensen discloses *a network comprising a plurality of Nodes interconnected by Links* [see Jensen, Figure 1, items 140, 142, 144, Col. 13, lines 65-67 and Col. 14, lines 1-12], However, Jensen does not explicitly disclose each Node is assigned a set of one or more coordinate labels, each representing a path comprising one or more Links or other Nodes; each coordinate label is unique to the Node to which it is assigned; a path between a first Node and a second Node being determined from one of said coordinate labels associated with said first Node and one of said coordinate labels associated with said second Node; and a pair of said Nodes that are connected by said Links stores the set of one or more coordinate labels corresponding to the other Node of said pair of Nodes.

7. In the same field of endeavor, Yamazaki discloses (e.g., network structure storing and retrieval method for a data processor). Yamazaki discloses *(a) each Node is assigned a set of one or more coordinate labels, each representing a path comprising one or more Links or other Nodes* [see Yamazaki, Col. 8, lines 12-39, Figure 2a-4, 3, 4, 5a-f, 6a-1]; *(b) each coordinate label is unique to the Node to which it is assigned* [see Yamazaki, abstract]; *(c) a path between a first Node and a second Node being determined from one of said coordinate labels associated with said first Node and one of said coordinate labels associated with said second Node* [see Yamazaki, Col. 2, lines 5-62]; *and (d) a pair of said Nodes that are connected by said Links stores the set of one or more coordinate labels corresponding to the other Node of said pair of*

Nodes (Yamazaki teaches that each node information is stored as a concrete content of node in correspondence with the respective node numbers N), [see Yamazaki, Col. 2, lines 40-46, Col. 3, lines 55-64 and Col. 4, lines 5-26].

8. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Yamazaki's teachings of a network structure storing and retrieval method for a data processor with the teachings of Jensen, for the purpose of being able to automatically assign link identifiers to each link connecting respective node [see Yamazaki, Col. 2, lines 42-54]. However, Jenson-Yamazaki does not explicitly disclose non-adjacent nodes.

9. In the same field of endeavor, Ogier discloses (e.g., mobile ad hoc extensions). Ogier discloses non-adjacent nodes [see Ogier, section 0263].

10. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Ogier's teachings of mobile ad routing multicast data communications with the teachings of Jenson-Yamazaki, for the purpose of a mobile wireless network that can perform reliably and efficiently [see Ogier, Col. 2, section 0012]. By this rationale **claim 1** is rejected.

11. Regarding **claim 8**, the limitations of this claim is substantially the same as that of claim 1, and thus is rejected for the same rationale in rejecting claim 1, above. Furthermore, with regards to the limitation of *at least one of said plurality of Nodes automatically creates at least one cache and redirects a data request to said at least one cache* (The Examiner takes Official Notice (see MPEP 2144.03) that it is extremely well known in the networking art to redirect request to a cache as well as creating a cache).

12. Regarding **claim 9**, Jensen-Yamazaki and Ogier discloses *where said at least one cache is mobile* [well known]. By this rationale **claim 9** is rejected.

13. Regarding **claim 10**, Jensen-Yamazaki and Ogier discloses *where said at least one cache contains a load from a mobile Node* [well known]. By this rationale **claim 10** is rejected.

14. Regarding **claim 16**, Jensen-Yamazaki and Ogier discloses *a method for determining a path from a source Node to a destination Node in a network comprising a plurality of Nodes interconnected by Links, said Nodes including a first Node, and a plurality of second Nodes, said second Nodes including said source Node and destination Node, said method comprising the steps of: (a) assigning to each of said second Nodes including said source Node and said destination Node, one or more coordinate labels, each coordinate label assigned to a second Node representing a path through said network from said second Node to said first Node* [see rejection of claim 1, supra]; *(b) determining a path from said source Node to said destination Node by combining one coordinate label of said source Node and one coordinate label of said destination Node* [see rejection of claim 1, supra]; *and (c) at one of said second Nodes, storing one or more coordinate labels of a second Node adjacent to said one second Node* [see rejection of claim 1, supra]. The same motivation that was utilized in the combination of claim 1, applies equally as well to claim 16. By this rationale **claim 16** is rejected.

15. Regarding **claim 18**, Jensen-Yamazaki and Ogier discloses *a Node for use in a network, said network comprising a plurality of Nodes connected by Links* [see rejection of claim 1, supra], *wherein: (a) said Node for use in said network has one or more coordinate labels assigned thereto, each coordinate label representing a path from said Node to a particular other Node of said network, each of said coordinate labels being unique to said Node* [see rejection of

claim 1, supra]; *and (b) said Node stores one or more coordinate labels corresponding to an adjacent Node* [see Jensen, Col. 12, lines 54-67]. The same motivation that was utilized in the combination of claim 1, applies equally as well to claim 18. By this rationale **claim 18** is rejected.

16. Regarding **claim 20**, Jensen-Yamazaki and Ogier discloses *wherein said Node reroutes any data intended for said adjacent Node in the event said adjacent Node is unable to receive said packet* [see Jensen, Col. 12, lines 54-67]. By this rationale **claim 20** is rejected.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

18. **Claims 2, 17 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenson-Yamazaki and Ogier as applied to claim 1, 16 and 18 above, and further in view of Bader et al. (Bader), U.S. Patent No. 6,112,249.

19. Regarding **claim 2**, Jensen-Yamazaki discloses the invention substantially as claimed. However, Yamazaki does not explicitly disclose wherein each Node of said pair of Nodes reroutes any data intended for the other Node of said pair of Nodes in the event said other Node of said pair of Nodes moves or fails.

20. In the same field of endeavor, Bader discloses (e.g., non-disruptively rerouting network communications from a secondary network path to a primary path). Yamazaki discloses *wherein each Node of said pair of Nodes reroutes any data intended for the other Node of said pair of Nodes in the event said other Node of said pair of Nodes moves or fails* [see Bader, abstract, Col. 5, lines 49-67 and Col. 10, lines 38-55].

21. Accordingly, it would have been obvious to one ordinary skill in the networking art at the time the invention was made to have incorporated Bader's teachings of non-disruptively rerouting network communications from a secondary network path to a primary path with the teachings of Jensen-Yamazaki and Ogier, for the purpose of providing reduced cost in the event of network failures and to maintain load balancing in load balanced networks after failure of a communications path [see Bader, Col. 3, lines 25-33]. By this rationale **claim 2** is rejected.

22. Regarding **claim 17**, Jensen-Yamazaki, Ogier and Bader discloses wherein at said one second Node, rerouting data intended for said second Node adjacent to said one second Node in the event said second Node adjacent to said one second Node Nodes moves or fails [see rejection of claim 2, supra]. The same motivation that was utilized in the combination of claim 17, applies equally as well to claim 17. By this rationale **claim 17** is rejected.

23. Regarding **claim 19**, Jensen-Yamazaki, Ogier and Bader discloses wherein said Node reroutes any data intended for said adjacent Node in the event said adjacent Node is moved to a different location [see rejection of claim 2, above]. The same motivation that was utilized in the combination of claim 2, applies equally as well to claim 19. By this rationale **claim 19** is rejected.

Claim Rejections - 35 USC § 103

24. **Claims 3-7 and 11-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen-Yamazaki and Ogier in view of Denman et al. (Denman), U.S. Patent No. 6,490,451.

25. Regarding **claim 3**, Jensen-Yamazaki discloses the invention substantially as claimed. Yamazaki discloses *a network comprising a plurality of Nodes interconnected by Links* [see rejection of claim 1, supra], *wherein: (a) each Node is assigned a set of one or more coordinate*

labels, each representing a path comprising one or more Links or other Nodes [see rejection of claim 1, supra]; *(b) each coordinate label is unique to the Node to which it is assigned* [see rejection of claim 1, supra]; *(c) a path between a first Node and a second Node being determined from one of said coordinate labels associated with said first Node and one of said coordinate labels associated with said second Node* [see rejection of claim 1, supra]. However, does not explicitly disclose (d) at least one of said plurality of Nodes is automatically replicated to create at least one mirror Node.

26. In the same field of endeavor, Denman discloses (e.g., system and method for providing packet-switched telephony). Denman discloses *at least one of said plurality of Nodes is automatically replicated to create at least one mirror Node* [see Denman, Col. 8, lines 5-7].

27. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Denman's teachings with the teachings of Jensen-Yamazaki and Ogier, for the purpose of including multiple replications of any node in order to improve efficiency and overall performance [see Denman, Col. 8, lines 5-7]. By this rationale claim 3 is rejected.

28. Regarding **claim 4**, Jensen-Yamazaki, Ogier and Denman discloses *where said at least one mirror Node is mobile* [see Denman, Col. 8, lines 5-7 and Figure 2]. The same motivation that was utilized in the combination of claim 3, applies equally as well to claim 4. By this rationale **claim 4** is rejected.

29. Regarding **claim 5**, Jensen-Yamazaki, Ogier and Denman discloses *where said replicated Node is mobile* [see Denman, Col. 8, lines 5-7]. The same motivation that was utilized in the combination of claim 3, applies equally as well to claim 5. By this rationale **claim 5** is rejected.

30. Regarding **claim 6**, Jensen-Yamazaki, Ogier and Denman discloses *where said replicated Node is a part of the World Wide Web* [see Denman, Col. 5, lines 23-45]. The same motivation that was utilized in the combination of claim 3, applies equally as well to claim 6. By this rationale **claim 6** is rejected.

31. Regarding **claim 7**, Jensen-Yamazaki, Ogier and Denman discloses *wherein a packet is routed to a closest Node of said plurality of mirror Nodes* [see rejection of claim 3, supra]. By this rationale **claim 7** is rejected.

32. Regarding **claim 11**, the limitations of this claim is substantially the same as that of claim 1, and thus is rejected for the same rationale in rejecting claim 1, above. Furthermore, with regards to the limitation of *at least one of said plurality of Nodes is a mobile Node* [see Denman, Figure 2]. The same motivation that was utilized in the combination of claims 1 and 3, applies equally as well to claim 11. By this rationale **claim 11** is rejected.

33. Regarding **claim 12**, Jensen-Yamazaki, Ogier and Denman discloses where said mobile Node is a PDA [see Denman, Col. 3, lines 40-67]. The same motivation that was utilized in the combination of claims 1, 3 and 11 applies equally as well to claim 12. By this rationale claim 12 is rejected.

34. Regarding claim 13, Jensen-Yamazaki, Ogier and Denman discloses where said mobile Node is a cellular telephone [see Denman, Col. 5, lines 3-22]. The same motivation that was utilized in the combination of claims 1, 3 and 11 applies equally as well to claim 13. By this rationale claim 13 is rejected.

35. Regarding **claim 14**, Jensen-Yamazaki, Ogier and Denman discloses *where said mobile Node is a laptop computer* [see rejection of claim 3, supra]. The same motivation that was

utilized in the combination of claims 1, 3 and 11 applies equally as well to claim 14. By this rationale **claim 14** is rejected.

36. Regarding **claim 15**, Jensen-Yamazaki, Ogier and Denman discloses *where said mobile Node is a router located on a vehicle* (The Examiner takes Official Notice (see MPEP 2144.03) that it is extremely well known in the networking art at the time the invention was made for a mobile node to include router that is located within a vehicle, see also prior art of record, Chennakeshu et al., U.S. Patent No. 6,542,758, Figure 11, Col. 7, lines 39-47). The same motivation that was utilized in the combination of claims 1, 3 and 11 applies equally as well to claim 15. By this rationale **claim 15** is rejected.

Conclusion

37. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Vaughn, Jr. whose telephone number is (571) 272-3922. The examiner can normally be reached on 8:00-6:00, 1st and 2nd Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

William C. Vaughn, Jr.
Primary Examiner
Art Unit 2143
12 June 2005

WCV